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THE PROTECTION OF REINDEER AGAINST GADFLIES
(Zashchita severnykh olenei ot slepnei)

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THE PROTECTION OF REINDEER AGAINST GADFLIES (Zashchita severnykh olenei ot slepnei)

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Economic development of the Far North—industrial expansion and the accompanying population growth—presents a number of agricultural problems related to progress and an increase in the relative importance of the supply of local agricultural products. As is known, the main branch of Far North agriculture is deer breeding, and the main factors retarding its progress are insect pests, warble flies and bloodsucking Diptera. Great numbers of these attack the deer throughout summer pasturing, thus depriving them of rest and the chance to fully utilize their feeding period.

For controlling these pests, emulsions or solutions of insecticides are applied with the "Sever"["North"] sprayer. In this method, the free end of the hose with an attached nozzle is fixed to a lance and the liquid is sprayed from a height of 2—5 m, depending on wind velocity. The animals are treated during their stay at feeding grounds. This method of control is extensively used by deer breeders. A broad-spectrum insecticide is being evolved by the laboratory of our institute for controlling gadflies and other bloodsucking Diptera.

Tabanidae are very common in the forest-tundra and taiga regions of the Far North. For example, in the Dudinka area of Taimyr National District (site of the 1963 and 1964 observations), between 7 and 400 gadflies would attack one deer within 30 minutes. On days of intense gadfly activity, it is impossible to make accurate counts. Thus, in 1964, in addition to the study of gadfly development, we began experiments on the effectiveness of spraying deer herds.

This work was carried out on a herd of 1800 deer during the period of peak gadfly activity (18—26 July). For spraying the animals, a combined insecticide-repellent emulsion containing 0.2—0.4% DDVP and 0.15—0.75% Hexamid was used. Before and after each treatment, insect counts were made according to the method of K. A. Breev, i. e., the number of gadflies approaching the deer during a 30-minute period was counted (see table).

As seen from the table, a sharp drop occurred in the gadfly numbers immediately after treatment. This was followed by a gradual increase until their numbers reached the initial level 4 hours later. The results of sprayings, as recorded in the table, only show the insecticidal action of the combined emulsion.

TABLE. Effect of insecticide-repellent emulsion on the intensity of gadfly attack

Date	Time	Composition of emulsion (%)		Metereological conditions				Number of gadflies	
		DDVP	Hexamid	wind velocity (m/sec)	tempera- ture	cloud	sun- light	before treatment	after treatment
				before/ after	before/ after	before/ after	before/ after		
18/7	1130-1220	0.2	0.15	2.6/1.0	19.0/18.6	1/4	+/-	218	92
21/7	1515-1605	0.2	0.75	2.0/2.1	14.2/14.6	8/8	-/+	57	23
22/7	1200-1350	0.2	0.75	2.8/1.6	15.6/15.8	1/0	+/+	2	2
23/7	1100-1155	0.2	0.75	2.9/1.9	15.2/15.4	2/3	+/+	145	6
24/7	1805-1900	0.2	0.75	1.4/1.8	16.2/16.2	5/3	+/+	51	7
26/7	1505-1600	0.4	0.35	4.2/4.2	18.2/18.2	5/4	+/+	58	1

Considering the extent of its insecticidal action and resultant immediate effect, the DDVP preparation surpasses all insecticides presently in use. Because of the mass destruction of gadflies if it is used regularly, it can be suggested that a considerable reduction in gadfly population will be achieved, leading to a long-term decline in total numbers.



0 1620 0329 8310

Year		1950-1959		1960-1969		1970-1979		1980-1989		1990-1999	
Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159
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1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159	1150-1159

During the period of the investigation, the number of deaths from cancer has increased. The increase in the number of deaths from cancer is due to the increase in the number of people living in the area. The increase in the number of people living in the area is due to the increase in the number of people living in the area. The increase in the number of people living in the area is due to the increase in the number of people living in the area.